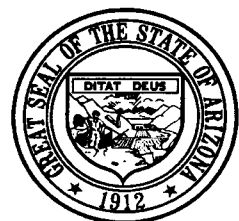


Future Directions



12.1 INTRODUCTION

The third management period will be a critical time for water management in the Prescott Active Management Area (AMA). The water providers and users will continue to adjust to the implementation of new assured water supply requirements, to increases in municipal demand, and to needs for longer range planning and investments in order to secure water supplies for the long term. The Prescott AMA has experienced rapid growth in recent years. New and diverse residential and commercial development is changing this historically rural region of the state. Projections indicate that the rate of development and change is likely to continue. As discussed in chapters 3 and 11, water use patterns are also showing corresponding increases. Agricultural water use is declining, but is still significant. Municipal use is increasing rapidly and new non-groundwater supplies will need to be developed to serve any lands subdivided after the January 1999 Declaration that the AMA is no longer at safe-yield. As these pressures continue to be exerted on the local water resource base, it is clear that the management issues in this AMA are becoming more complex and far reaching than those of the past, and the ability to meet these challenges is becoming more important.

The ultimate water management challenge facing the Prescott AMA is to ensure a sustainable supply of good quality water sufficient to maintain a stable economy in the area. This goal should be accomplished in a manner that is sensitive to the environment and neighboring communities. Meeting this challenge will require a cooperative effort between the Department and local residents, community leaders, and water providers. This chapter will look at the opportunities for the state and the region to work together in this effort. Much of the supporting information for assertions made in this chapter is contained in chapters 2, 3, and 11.

Historic and current water supplies have primarily been drawn from the limited groundwater in storage in the AMA. The January 1999 Declaration that the AMA is overdrawing its groundwater supply and the resulting implementation of Assured Water Supply Rules (AWS Rules) put a basic framework in place to ensure that new subdivisions rely on renewable or imported supplies. It is now up to local communities and water providers to make the necessary investments to move towards the water supply and management systems of the future.

Failure on the part of the local communities to take the necessary actions to address the long-term issues of the water supplies and their future management now may increase the cost of addressing them at a later date. Potential consequences arising from a failure to act include the loss of supply from exempt wells, increased costs resulting from increased pumping depths, loss of water quality, land subsidence and settling, etc.

Safe-yield, the management goal of the Prescott AMA, necessitates a balance between groundwater withdrawals and recharge, resulting in stabilizing water levels on an AMA-wide basis over time. Under safe-yield conditions the net recharge to the aquifer (mountain front and stream recharge, incidental recharge from irrigation and canals and artificial recharge minus surface and subsurface flows out of the AMA) is no greater than the groundwater pumping. Safe-yield is closely associated with the concept of sustainability, which means that resource availability does not diminish over time and hence, is entirely consistent with the need to ensure long-term, safe, reliable water supplies.

The debate on the safe-yield status of the AMA throughout 1998, and the final declaration in January 1999, resulted in significant public education and increasing public awareness of water issues. Increasing the public knowledge of water management issues will make it easier to secure public support necessary to make appropriate water management decisions. This debate also brought home the understanding that the economy of the region is linked to ensuring sustainable water supplies. Without an assurance that there is a sufficient supply for historical uses and for anticipated future needs, the economy could stagnate and decline.

The significance of retirement communities and tourism to the local economy and the limited access to additional water supplies make the Prescott AMA unique among the safe-yield AMAs (Phoenix, Tucson, and Prescott). Unlike the other AMAs, the Prescott area does not have ready access to outside sources of additional water supplies. These conditions will continue to challenge the ability of the area to secure the necessary supplies to sustain economic and population growth. Unless currently available supplies (effluent, surface water, grandfathered groundwater rights) are used efficiently and additional water supplies are found and made available for importation into the AMA, the mandated goal of safe-yield will limit future population growth in some areas of the AMA.

12.2 THE DEPARTMENT'S PERSPECTIVE ON WATER MANAGEMENT IN THE PRESCOTT ACTIVE MANAGEMENT AREA

The Prescott AMA is not in safe-yield. Current pumping is nearly double the safe-yield volume, with up to 10,000 acre-feet of additional growth on groundwater approved in advance of the limits imposed by the preliminary (August 1998) and final (January 1999) Declaration that the AMA is out of safe-yield. The water budget shown in Table 11-4 illustrates that the current policies and practices of local water providers and existing state mandates will not be sufficient to return the AMA to safe-yield by the target date of 2025. The AWS Rules framework limits any worsening of overdraft by instituting new controls on future subdivisions, however, demand by lots approved before the rules were changed will continue to increase the overdraft. Due to the increased pumping resulting from development of these lots, returning to safe-yield will have to result from actions by cities, towns, water providers, and water users to use water as efficiently as possible and to develop the alternative supplies necessary for reducing reliance on groundwater.

Although the AMA is no longer in safe-yield, there are existing and potentially available additional alternative water supplies, located within the AMA. These alternative water supplies, which can replace groundwater and accommodate some of the projected new municipal growth, include: effluent available for direct or indirect uses, purchase of existing groundwater and surface water rights, and the attainment of rights to surface water leaving the AMA through exchanges and sever and transfer actions. Additionally, groundwater may be physically available from groundwater basins adjacent to the AMA; however, current statutes only allow transfers from the Big Chino groundwater basin under specific criteria. The combination of these available resources, if developed and used efficiently, should be adequate to allow the AMA to achieve safe-yield and to satisfy current and committed demand and some additional growth. The availability of these supplies is dependent on the willingness and capabilities of water providers to invest in the infrastructure necessary to treat and deliver alternative supplies.

Conservation is also critical to achieving safe-yield. Conservation and efficient use reduces the total supplies needed and allows water to remain in the ground, having a significant effect on demand over time. Even relatively modest reductions in water use, particularly in the municipal sector, result in significant long-term savings. Municipal sector water use efficiency, often measured as GPCD (gallons per capita per day), is greatly influenced by individual consumer choices on landscape, water use features (from swimming pools to low flow toilets), and behavioral practices as well as water provider investments to reduce leaks and other losses. At a minimum, water providers and major users should invest in conservation up to the point where the cost of the water conserved is equal to the cost of developing a new alternative water supply. In addition, water supply and demand considerations should also be integrated into community land use planning and economic development choices. Considerations such as the amount of water used per new job created should be considered in evaluating industrial recruitment decisions.

The Yavapai County Water Advisory Board, working in conjunction with the Department of Water Resources (Department), the Groundwater Users Advisory Council (GUAC), and local communities may provide a forum for discussing and adopting both the individual and the collaborative efforts needed to implement alternative supply development and conservation programs. In the event the necessary actions

are not taken, it may eventually become the state's responsibility to develop programs which will mandate the steps necessary to reach safe-yield.

12.2.1 Current Water Demand & Supply Trends

Recognizing and understanding potential future water supply and demand trends is key to maintaining a secure water supply. A few significant trends which will shape future water management issues for the AMA are discussed below.

Irrigated agriculture is an industry in decline in the Prescott AMA and is not expected to remain a major water user in the future. Currently, agricultural water use accounts for approximately 37 percent of the water use in the AMA. The water use in this sector is projected to decrease to approximately 15 percent of the total AMA water use by 2025. Agricultural surface and groundwater rights in the AMA are being converted for recreational and municipal water supplies. The current (baseline) average demand of 6,800 acre-feet by agriculture, indicated in Chapter 11, Table 11-5, is expected to decline to 4,100 acre-feet by 2025. The Chino Valley Irrigation District (CVID), a surface water right holder in the Little Chino subbasin, has sold the majority of their surface water rights to the City of Prescott (City). The approximately 2,400 acres of land having a right to be irrigated with surface water are being converted to urban development. The surface water historically used to produce crops on these acres is being used as a recreational, wildlife, and municipal water supply. In addition, groundwater rights in the AMA are being extinguished for assured water supply credits for new developments. Most of the irrigation grandfathered rights (IGFRs) held by landowners in the CVID have been or will be extinguished and the credits assigned to the City as part of the buy out by the City. Extinguishment of most of the remaining IGFRs in the CVID for assured water supply credits will likely be accomplished by the year 2005. The majority of all IGFRs in the AMA will be extinguished by the end of the third management period. Water demand projections presented in Chapter 11 indicate that the demand for water by agriculture will be insignificant, except for some specialized operations, such as u-pick-em type farms.

These changes will result in a reduction in both agricultural water use and in recharge to the aquifer from agricultural irrigation. Although municipal demand and effluent production will increase as agricultural pumping and recharge decline, the resulting changes in the locations of the pumping and the recharge (both incidental and artificial) will affect local hydrology. The Department, in conjunction with local communities, will use the hydrologic model of the AMA to further examine such impacts.

Chapter 3 identifies that water use by the industrial sector consists primarily of turf water use. This industry will increase proportionally to population growth and will likely continue to represent approximately 3 percent of the AMA's water use. Demands are currently being met with treated effluent and groundwater rights acquired through the conversion of IGFRs to Type 1 non-irrigation grandfathered rights. Use of effluent to serve such needs will preserve higher quality and limited groundwater resources for potable use. Local land use and zoning policies may have a significant impact on the number and location of new golf courses, as well as their access to effluent and other alternative water supplies. The City has adopted policies to convert existing large landscape users to effluent. In order to reserve effluent for recharging the groundwater system, however, the City has also adopted policies to prohibit additional commitments of either groundwater or effluent to new golf courses.

Data presented in Chapter 3 illustrate that municipal water demand constitutes the majority of water use in the AMA. The January 1999 Declaration by the director of the Department that the AMA is not in safe-yield will have both immediate and long-term impacts on municipal water use in the AMA. The primary effect of the declaration is that no new subdivisions will be permitted which use groundwater pumped from within the AMA as the source of the required 100 year water supply. Two minor exceptions to this prohibition on groundwater use are: (1) that new subdivisions will be given a small allocation of allowable groundwater pumping as part of the transition to the new rules and

(2) limited groundwater pumping rights can be earned by extinguishing previously issued grandfathered groundwater pumping rights. This may lead to an increase in the rate at which irrigated farmland goes out of production as IGFRs are extinguished for assured water supplies or converted to Type 1 non-irrigation grandfathered rights to serve additional municipal water demands and to procure assured water supplies. The impacts on development activity of the strengthened assured water supply requirements may not be immediately apparent since the 30,000 lots approved with a right to receive groundwater before the declaration will provide an adequate supply of lots for a number of years.

The three communities of the tri-city area, the City of Prescott, the Town of Prescott Valley, and the Town of Chino Valley, are in varying states of readiness to deal with the declaration that the AMA is not in safe-yield.

The City has established an excellent water supply portfolio for its future needs. The City has demonstrated the physical availability of 11,200 acre-feet of groundwater annually and has made significant investments to develop effluent and surface water supplies and to purchase irrigation grandfathered rights, as part of the CVID purchase. These irrigation grandfathered rights can be extinguished for assured water supply credits. The City is likely to apply for and receive a Designation of Assured Water Supply from the Department based on these resources. The City also adopted an "Overall Water Planning and Management Program" in December 1998 which committed the City to assisting the AMA efforts in achieving safe-yield. The City adopted a number of policies to efficiently manage the available resources and to attain the safe-yield goal.

A significant portion of the 11,200 acre-feet of groundwater physically available to the City is mined groundwater. The City's adopted plan commits them to utilize no more than an 8,000 acre-feet per year net withdrawal of groundwater and to adjust this target as more is learned about the AMA water resources. The Department and the City will work cooperatively to refine the AMA hydrologic model, examine long range water supply scenarios and, based on this information, to establish acceptable volumes of pumping. The City has an Underground Storage and Recovery Permit for 3,000 acre-feet of treated effluent annually and can modify the permit for a volume of up to 6,700 acre-feet annually. The City currently recharges, for credits, approximately 2,000 acre-feet of treated effluent annually and directly serves approximately 1,000 acre-feet of effluent for turf irrigation, primarily at golf courses. The volume of effluent available for either direct use or recharge credits will continue to increase proportionally with population and as the City pursues its policy of extending service and requiring all new development to connect to the sewer system. The City has allocated 3,740 acre-feet of effluent or surface water for direct use by CVID farmers, golf courses and other industrial uses. The recently adopted plan commits the City to converting the remaining large irrigation facilities from potable water to treated effluent and prohibits additional commitments of either effluent or groundwater to new golf courses. The City successfully negotiated an inter-governmental agreement with the CVID to acquire the surface water rights held by the CVID through a sever and transfer action. This provides the City with approximately 1,500 acre-feet of surface water annually for recharge or direct use in addition to the water used to maintain Watson and Willow lakes.

The City will also acquire extinguishment credits for assured water supply from most of the CVID lands holding IGFRs. The City also holds rights to approximately 2,700 acre-feet of surface water annually from Del Rio Springs. Additionally, the City has rights to approximately 8,000 acre-feet of the 14,000 acre-feet of groundwater potentially available for import (without a requirement to retire historically irrigated lands) from the Big Chino groundwater basin, under authority of the 1991 Groundwater Transportation Act. The City, as well as any city or town within the AMA, may retire historically irrigated land in the Big Chino groundwater basin to import additional groundwater from the Big Chino. Finally, the City holds a Type 2 non-irrigation grandfathered right for approximately 3,200 acre-feet annually. This Type 2 right, originally granted due to the City's historic withdrawals of groundwater from outside their service area, is of limited use to the City because they can also withdraw that groundwater under the authority of their service area right.

The City of Prescott's adopted water planning and management program contains a number of additional significant points including:

- a recognition of the link between water resources management and both the City's and the regions overall growth management policies,
- a commitment to work cooperatively with other AMA and Verde Valley entities on both short and long term regional water management planning and issues,
- the establishment of alternative water supply allocation procedures and targets which are tied to the City's water budget and an extension of these controls to lot splits within the City,
- the adoption of conservation programs, including fines for excessive use by large non-residential water users, to ensure the City meets the Prescott AMA per capita conservation requirements.

Prescott Valley Water District purchased the Shamrock Water Company in January of 1999. Currently, Prescott Valley Water District serves about 3,600 acre-feet of groundwater and has the right to serve already approved but not yet developed lots up to an additional volume of about 3,400 acre-feet of mined groundwater annually. Prescott Valley Water District is currently making critical investments to expand their groundwater pumping capacity, increase water storage, and improve distribution system lines in order to reliably serve its current level of demand. Prescott Valley Water District is also initiating efforts to develop alternative supplies. Prescott Valley Water District's wastewater treatment plant has the capacity to treat approximately 3,000 acre-feet annually. Prescott Valley Water District is planning to construct a recharge facility and begin accruing credits for recharging treated effluent. In addition, Prescott Valley Water District has the right, under the 1991 Groundwater Transportation Act, to import groundwater from the Big Chino groundwater basin through the retirement of historically irrigated acreage in the Big Chino. Prescott Valley Water District is also exploring the potential to acquire surface water rights on the Upper Agua Fria River.

Prescott Valley Water District will need to identify and pursue every available opportunity to increase their water supply to accommodate planned future demands and to avoid serious over drafting of allowed groundwater.

The Town of Chino Valley (Town) does not currently have their own municipal water system. There is no wastewater collection and treatment system in the Town of Chino Valley. The Town owns an 800 acre farm with IGFRs. They also have a right to obtain groundwater imports from the Big Chino groundwater basin through the retirement of irrigated acreage in the Big Chino. Citizens of the Town voted not to engage in the municipal utility business and it is unlikely that they will have a town operated water delivery system or wastewater treatment plant before the end of the third management period.

Building a water supply portfolio which can address the future water needs of the Town is probably the primary water management task facing the community now. Even though the Town does not currently have a municipal water system or a waste water collection and treatment facility, they must begin planning for their construction and use. The 1998 legislation on the AMA's safe-yield status (Laws 1998, Ch. 86) provided that if any water provider eventually provided service to households on their own exempt wells prior to August 21, 1998, the provider would be given a groundwater pumping allowance sufficient to serve this demand. To ensure a long-term supply of water for the community the Town needs to address:

- Acquisition of irrigation grandfathered right supplies, in addition to those they already hold, to earn future groundwater supply rights through the AWS Rules extinguishment provisions.
- Implementation of a wastewater collection and treatment facility to capture and make available treated effluent.
- The feasibility of potential sites for recharging treated effluent.

Ensuring a sustainable water supply for the entire Prescott AMA will necessitate cooperative efforts on the part of the tri-cities, Yavapai County, and water providers and developers in the unincorporated areas. The City of Prescott will continue to be looked to as a leader in water management issues and strategies in the Prescott AMA. The City will have to make decisions on their level of participation in any region-wide water supply efforts. The Town of Prescott Valley will need to forge alliances with the other communities and Yavapai County to be able to generate the political and financial means to implement long range regional water supply plans for the Town of Prescott Valley and the AMA. The Town of Chino Valley and Yavapai County will need to begin assessing the future water supply needs, potential supplies, and water delivery options for their jurisdictions. The Yavapai County Water Advisory Board, with representatives of all the communities within Yavapai County, may serve as one entity to initiate such regional planning efforts.

12.3 CHALLENGES TO ACHIEVING SAFE-YIELD AND DEPARTMENTAL STRATEGIES IN RESPONSE TO THE CHALLENGES

The primary objective of future water management programs is to achieve a sustainable balance between water supply and demand for the entire AMA. A coordinated and comprehensive effort by the tri-city communities and surrounding areas to manage all the water supplies available to the AMA is likely the most practical approach to providing a supply capable of sustaining continued economic growth. The total supply of all potentially available water resources may be sufficient to meet the projected demand for some period of time into the future. However, there are a number of significant challenges to overcome in achieving sustainable and efficient management of the water resources. These challenges include the current and committed demand for groundwater, the loopholes in efforts to restrict new groundwater use, the need to quantify both the impacts of continued groundwater overdraft, the need to quantify needs for alternative supplies, and the obstacles to obtaining potential alternative supplies. These challenges are discussed further below.

- (1) The current groundwater overdraft conditions and the increasing demand on the available water supplies caused by continued population growth both within the AMA and Yavapai County as a whole will accelerate the current rate of drawdown, reflected in the director's January 1999 Declaration that the Prescott AMA is not in safe-yield, of 1.46 feet per year. Water budget scenario discussions in Chapter 11 illustrate the high rate of expected population growth and increases in demand projected for the Prescott AMA.
- (2) The current over-commitment of groundwater pumping rights within the AMA for grandfathered groundwater right holders (IGFR, Type 1, and Type 2), already approved subdivisions, and currently held withdrawal permits, and the inability under current state law to limit this pumping poses a potential threat to any program(s) aimed at achieving safe-yield in the AMA. The approximately 5,600 acres of land holding irrigation grandfathered rights could be extinguished for approximately 210,000 acre-feet of assured water supply credits or converted to approximately 16,800 acre-feet of Type 1 rights.
- (3) The future demands from new non-residential water users not subject to assured water supply restrictions and therefore able to pump additional groundwater (e.g., nonresidential uses not served by a designated provider, future general industrial use permits, and other withdrawal authority requests) particularly in communities not having a municipal system, will increase the overdraft and pose a threat to any program(s) aimed at achieving safe-yield. As population increases in communities or areas not having a municipal water system, the schools, industrial users, and other water users will look to the Department's permitting process, i.e., GIU permits to access groundwater supplies.
- (4) The future demands from new residential water users not subject to assured water supply restrictions. These include unrestricted new exempt wells drilled to serve residential development not served by a

designated provider and not part of a subdivision (e.g., lot splits and wildcat subdivisions), and small dry lot subdivisions.

- (5) The need for additional hydrologic information and long-range water supply and demand planning in order to further understand the implications of the issues listed above and to determine the needs for additional water supplies in order to guide investments and better manage the water resources.
- (6) The unequal distribution of those resources to the various communities.
- (7) Uncertainty about the legal and financial ability of AMA communities to import supplies.

A number of different approaches can be taken by local entities and the Department both collectively and individually to begin addressing these challenges. Beginning immediately, and continuing during the third management period, the Department is committed to pursuing studies and discussions leading to resolving these challenges. First, studies are needed to further quantify the impact on groundwater supplies of different water management scenarios and to quantify the need for alternative supplies. Second, once the above studies are concluded, efforts are needed to identify potential alternative water supplies both within and outside the AMA. At the same time, consideration must be given to new regulatory programs and the potential for some type of regional water district. Finally, programs need to be developed and implemented to return the AMA to safe-yield. Further discussion of each of these efforts follows.

The Department is committed to working with communities, technical experts and interested parties throughout the Prescott AMA to complete technical studies considering long-term needs and to develop water management solutions. Funding appropriations by the Arizona Legislature will allow the Department to expand current monitoring efforts, to prepare scopes of work, and to implement the necessary studies to begin updating and refining the hydrologic model of the AMA. Additional funding needs may come from future legislative actions, as well as from local community and county participation. Updating and refining the Department hydrologic model will provide communities with reliable data for their efforts to determine their level of contribution for attaining safe-yield. The use of the Prescott AMA hydrologic model by local planning agencies can provide an excellent tool for scenario analysis to evaluate the impacts of the continued population increases and different growth patterns as well as water supply options, including locations of groundwater withdrawal and potential recharge sites. This information should be valuable to the City of Prescott and the Town of Prescott Valley as they strive to achieve safe-yield and develop their water and growth management plans. Hydrologic analysis can also be used to examine alternative land use scenarios such as: the collective regional impact of new exempt well pumpage resulting from parcel splits, the potential for aquifer compaction and land subsidence or earth fissures as well as water quality impacts that result from groundwater over-drafting. Use of the model to determine aquifer impacts as a result of alternative land development patterns may enable Yavapai County, the Town of Prescott Valley, the Town of Chino Valley, and the City of Prescott to establish appropriate subdivision standards as well as programs to control lot splitting or to require minimum lot sizes based on exempt well impacts. Continued population and water demand growth in portions of Yavapai County outside of the AMA will also increase the water demands of the region and put pressure on the limited supplies. The Department will work with the County and the Yavapai County Advisory Board to further examine these region-wide trends and to assist in both local and regional efforts to quantify the need for additional water supplies. These work efforts will result in a series of technical reports and policy recommendations.

The AMA does not have a readily accessible source of renewable water supplies available to import into the AMA. After the effort to quantify the long term needs of the AMA is completed, further work will be necessary to secure additional supplies. Identification of renewable supplies from outside the AMA and subsequent quantification of supplies which might be available will require substantial funds. Any water importation effort may also require the cooperative efforts of others who perceive negative impacts from

such transfers. The Department will participate in efforts to quantify the safe-yield volume that may be available for transfer from the Big Chino groundwater basin (Upper Verde) to the Prescott AMA. Funding appropriations by the Arizona Legislature plus AMA augmentation funds will provide initial funding for these efforts. Additional funding needs may come from future legislative actions as well as from local community and county participation.

Consideration of legislative and regulatory approaches is the third series of activities requiring consideration. Three different areas that should be considered are:

- (1) state law on interbasin transfers of groundwater,
- (2) development of some type of regional authority or district, and
- (3) development of new local or state regulatory programs.

Communities in the AMA, along with areas experiencing water shortages throughout rural Arizona, may wish to initiate discussions on limitations imposed by the Groundwater Transportation Act.

There are many different types of roles a regional authority, district, or other entity could take on. These could vary from a forum for information exchange, to a financial entity, or to an actual water supplier. A regional authority could have the responsibility of building a water portfolio sufficient to meet the planned future demands for the AMA. Such an entity would acquire rights to supplies and assign or award volumes of supply to providers or developers. Previous water resources investments and to a lesser degree, current law and the AWS Rules, have divided the communities of the AMA into those with significant water resources and those with little or no future supplies. This distribution complicates efforts toward a cooperative approach. The formation of a regional water authority which could manage the available water supply is one potential method for developing costly infrastructure and collectively managing the water resources of the AMA. Implementation of a regional entity or some type of authority would require a new focus by local governments, water providers, developers, and the Department.

In general, voluntary water management actions based on technical information and education or local controls developed with state technical assistance are preferred. However, in some cases, state regulatory programs do prove necessary to meet goals such as safe-yield. Efforts to reduce the current over-commitment of groundwater pumping rights or to further restrict potential new groundwater demands would require authority to develop new state or local regulations. Below, a few potential regulatory approaches are listed which could assist in dealing with these concerns. These are just some tentative concepts for further discussion after the technical studies and identification of needs for alternative supplies are completed.

Potential programs to address the current over-commitment of groundwater pumping rights:

- Develop incentives/regulations to reduce municipal pumping to safe-yield volume
- Limit IGFR to Type 1 conversions
- Limit assured water supply GFR extinguishment credits to where actual pumping is being retired
- Institute replenishment obligation for all groundwater pumped, working through a regional authority

Potential programs to address new non-residential water users not subject to assured water supply restrictions:

- Limit or not issue new withdrawal authorities
- New withdrawal authorities have replenishment obligation or some other fee to finance the activities of a regional authority
- Expand AWS Rules to cover non-residential uses associated with Certificates of AWS

Potential programs to address new residential development not subject to assured water supply restrictions:

- Limit new exempt wells or impose conservation requirements
- Impose a fee paid to a regional authority for exempt wells so the regional authority can develop alternative supplies
- Change AWS Rules to eliminate dry lots > 20 lot exemption for safe-yield goal
- Require lot split development to contribute to a regional authority in some way
- Initiate incentives or requirements for connecting to central sewer system to facilitate effluent reuse/recharge

The result of the various studies and evaluations of potential management efforts needs to be the development and implementation of programs to achieve safe-yield. The success of any regional effort at fostering cooperation on infrastructure development, sharing of resources, importing water, or supporting additional regulations would depend on the support of the local governments and residents of the AMA as well as the communities outside the AMA who may be impacted by actions, such as importing groundwater from adjacent groundwater basins outside the AMA. The Yavapai County Water Advisory Board is a logical entity to work along with AMA entities to study the larger-than-AMA regional needs and to secure regional support for potential solutions.

12.4 CONCLUSIONS

One very positive result of the recent debates over the safe-yield status of the Prescott AMA has been the considerable public interest focused on water issues. Maintaining this level of awareness of water issues will go a long way to building support for future solutions to water needs. An informed and educated public, having a foundation in the relationships between the economy and population growth, as well as the use and availability of water supplies, will focus the activities and efforts of the political and governmental agencies charged with management of these resources. This may well facilitate a cooperative approach to the acquisition and management of water supplies that could evolve into some type of regional water replenishment and management entity.

The major task facing the Department is to implement a strategy which will bring the local communities together in a unified effort to solve the water resource/economic related issue. This strategy includes the presentation of factual data describing the hydrologic state of the AMA, the importance of attaining safe-yield, and the related consequences. The challenge will be to ensure that the populations of the AMA, and those impacted outside the AMA, accept the data presented as accurate and reliable. It is only when this task has been accomplished that the AMA and Yavapai County residents and leaders will recognize how they can best work together to implement long-range management strategies.